

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 2 APR 1951

Received at London Office.....

Date of writing Report... 25.1.51... When handed in at Local Office... 19.51... Port of Amsterdam

No. in Survey held at Zaandam Date, First Survey 20 Sept 50 Last Survey 25 March 1951  
Reg. Book. (Number of Visits... 6...)

on the M.V. "R.P.S." Tons { Gross 499.97  
Not.....

Built at Zaandam By whom built Zaanlandsche Scheepsk Mij Yard No. 454 When built 1-51

Owners Rotterdamse Kolencentrale NV Port belonging to Rotterdam

Electrical Installation fitted by Sterel & Wechgelaar Contract No. When fitted 1-51

Is vessel fitted for carrying Petroleum in bulk NO Is vessel equipped with D.F. YES E.S.D. YES Gy.C. NO Sub.Sig. NO

Have plans been submitted and approved YES System of Distribution two wire insulated Voltage of supply for Lighting 110

Heating - Power 110 V Direct or Alternating Current, Lighting D.C. Power A.C. If Alternating Current state periodicity Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off YES Are turbine emergency governors fitted with a

trip switch as per Rule - Generators, are they compound wound YES except shaft driven generator, are they level compounded under working conditions YES

if not compound wound state distance between generators - and from switchboard - Where more than one generator is fitted are they

arranged to run in parallel NO, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole

negative pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of

test for machines under 100 kw. been supplied YES and the results found as per rule YES Are the lubricating arrangements and the construction

of the generators as per rule YES Position of Generators E.R. floor level

is the ventilation in way of generators satisfactory YES are they clear of inflammable material YES, if situated

near unprotected combustible material state distance from same horizontally - and vertically - are the generators protected from mechanical

injury and damage from water, steam and oil YES, are the bedplates and frames earthed YES and the prime movers and generators in metallic

contact YES except shaft driven generator Switchboards, where are main switchboards placed E.R. platform port side

are they in accessible positions, free from inflammable gases and acid fumes YES, are they protected from mechanical injury and damage from water, steam

and oil YES, if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation

material is used for the panels dead front type, metalboard, if of synthetic insulating material is it an Approved Type - if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed YES

Is the construction as per Rule YES, including accessibility of parts YES fuses are mounted on metal frame work on the back side

to pilot and earth lamps, voltmeters, etc. YES locking of screws and nuts YES, labelling of apparatus and fuses YES, fuses on the "dead"

side of switches YES Description of Main Switchgear for each generator and arrangement of equaliser switches 9 P fuses and 9 P 9 T

switch in conjunction with I.P. contactor equipped with R/C relay

and for each outgoing circuit I.P. switches of rotary type and I.P. fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 2

ammeters 1 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection - Earth Testing, state means provided earth indicating lamps connected to "E" through 9 P fuses

Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an approved type YES, are all fuses labelled as

per Rule YES If circuit breakers are provided for the generators, at what overload current did they open when tested - are the reversed current

protection devices connected on the pole opposite to the equaliser connection - have they been tested under working conditions, and at what current

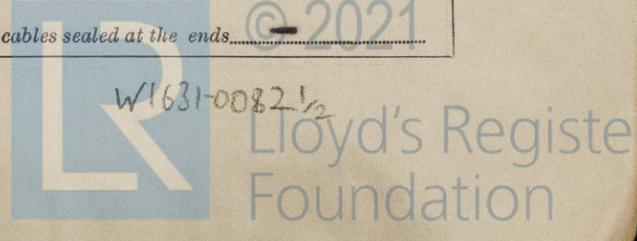
did they operate 1 amp Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule YES

Cables, are they insulated and protected as per the appropriate Tables of the Rules YES, if otherwise than as per Rule are they of an approved type -

state maximum fall of pressure between bus bars and any point under maximum load 56% are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets YES Are paper insulated and varnished cambric insulated cables sealed at the ends. -2021

\* - except the cartridges



with insulating compound or waterproof insulating tape. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. yes, are cables laid under machines or floorplates. yes, if so, are they adequately protected. yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered. yes or run in conduit. yes. State how the cables are supported and protected. Machinery spaces: h.l. & M.W.B. cable clipped to perforated plating

Large hold: h.l. & M.W.B. cable run in conduit. Accommodation spaces: h.l. cable clipped on main grounds on surface.

Are all lead sheaths, armoring and conduits effectually bonded and earthed. yes. Refrigerated chambers, are the cables and fittings as per Rule. —

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. yes, where unarmoured cables pass through beams, etc., are the holes effectually bushed. yes and with what material. lead

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. yes. Emergency Supply, state position. lighting fittings near life boats supplied from main battery and method of control. fuses near battery & switch in wheel house

Navigation Lamps, are they separately wired. yes controlled by separate double pole switches. yes and fuses. yes. Are the switches and fuses in a position accessible only to the officers on watch. yes, is an automatic indicator fitted. yes

Secondary Batteries, are they constructed and fitted as per Rule. yes, are they adequately ventilated. yes what is the battery capacity in ampere hours. NiCd battery 225 amp hours / 120 volts / 12 hrs life (main battery) lead battery 200 amp hours / 12 volts / 12 hrs life (starting equipment)

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. yes Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. no, if so, how are they protected. —

and where are the controlling switches fitted. — are all fittings suitably ventilated. yes

are all fittings and accessories constructed and installed as per Rule. yes Searchlight Lamps, No. of 1, whether fixed or portable. fixed, are their fittings as per Rule. yes

Heating and Cooking, is the general construction as per Rule. — are the frames effectually earthed. —, are heaters in the accommodation of the convection type. — Motors, are all motors constructed and installed as per Rule. yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. yes, if situated near unprotected combustible material state minimum distance from same horizontally. — and vertically. — Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. yes

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. — Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. yes

Control Gear and Resistances, are they constructed and fitted as per Rule. yes Lightning Conductors, where required are they fitted as per Rule. — Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with. —, are all fuses of the cartridge type. —

are they of an approved type. — Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. — Are the cables lead covered as per Rule. — Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. yes, are they suitably stored in dry situations. yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. yes

PARTICULARS OF GENERATING PLANT.

| DESCRIPTION OF GENERATOR. | No. of | RATED AT                     |        |          |                | DRIVEN BY                      | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. |                      |
|---------------------------|--------|------------------------------|--------|----------|----------------|--------------------------------|--|----------------------|
|                           |        | Kilowatts.                   | Volts. | Ampères. | Revs. per Min. |                                | Fuel Used.                                     | Flash Point of Fuel. |
| MAIN                      | 1.     | 10.                          | 110    | 87       | 1500           | Diesel engine                  | Diesel oil above 150° F                        |                      |
|                           |        | Make: <u>Lowen (Germany)</u> |        |          |                | Make: <u>Hildner (Germany)</u> |  |                      |
| EMERGENCY                 | 1.     | 7.2                          | 110    | 60.2     | 675/1050       | Main shaft                     |  |                      |
|                           |        | Make: <u>Wipac (England)</u> |        |          |                |                                |  |                      |
| ROTAARY TRANSFORMER       |        |                              |        |          |                |                                |  |                      |

GENERATOR CABLES.

| DESCRIPTION.                  | KILOWATTS. | CONDUCTORS.               |  | MAXIMUM CURRENT IN AMPERES. |       | APPROX. LENGTH (lead plus return feet). | INSULATED WITH. | HOW PROTECTED.       |
|-------------------------------|------------|---------------------------|--|-----------------------------|-------|---|-----------------|----------------------|
|                               |            | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit.             | Rule. |   |                 |                      |
| MAIN GENERATOR (disconnector) | 10         | 1                         | 50   | 87                          | 99    | 28                                      |                 | N.H.R. h.l. & M.W.B. |
| " EQUALISER                   |            |                           |  |                             |       |   |                 |                      |
| " (shaft driven)              | 7.2        | 1                         | 35   | 60.2                        | 78    | 30                                      |                 |                      |
| EMERGENCY GENERATOR           |            |                           |  |                             |       |   |                 |                      |
| ROTAARY TRANSFORMER: MOTOR    |            |                           |  |                             |       |   |                 |                      |
| " GENERATOR                   |            |                           |  |                             |       |   |                 |                      |

MAIN DISTRIBUTION CABLES.

| DESCRIPTION.                                       | CONDUCTORS.               |  | MAXIMUM CURRENT IN AMPERES. |       | APPROX. LENGTH (lead plus return feet). | INSULATED WITH. | HOW PROTECTED.       |
|--|---------------------------|--|-----------------------------|-------|---|-----------------|----------------------|
|  | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit.             | Rule. |   |                 |                      |
| AUX. SWITCHBOARDS AND SECTION BOARDS ...           |                           |  |                             |       |   |                 |                      |
| Supplied from main switchboard                     |                           |  |                             |       |   |                 |                      |
| 2 F.B. power E.R.                                  | 1                         | 4  | 40                          | 22.5  | 9                                       |                 |                      |
| 2 F.B. power E.R.                                  | 1                         | 4  | 41                          | 22.5  | 16                                      |                 |                      |
| 2 F.B. lighting forward                            | 1                         | 4  | 8                           | 22.5  | 104                                     |                 | N.H.R. h.l. & M.W.B. |
| 2 F.B. navigation lighting                         | 1                         | 2.5  | 3                           | 45.5  | 22                                      |                 |                      |
| 2 F.B. lighting aft                                | 1                         | 6  | 22                          | 24    | 18                                      |                 |                      |
| 2 F.B. lighting wheelhouse & aft supply navigation | 1                         | 2.5  | 5                           | 15.5  | 22                                      |                 |                      |

LIGHTING AND HEATING, ETC., CABLES.

| DESCRIPTION.                    | No. in Parallel Per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit. | Rule. | APPROX. LENGTH (lead plus return feet). | INSULATED WITH. | HOW PROTECTED.       |
|---------------------------------|---------------------------|--|-----------------|-------|---|-----------------|----------------------|
| WIRELESS                        | 1                         | 6  | 16              | 29    | 24                                      |                 |                      |
| NAVIGATION LIGHTS               |                           |  |                 |       |   |                 |                      |
| LIGHTING AND HEATING            |                           |  |                 |       |   |                 |                      |
| lighting E.R.                   | 1                         | 1.5  | 4               | 9.5   | 24                                      |                 | N.H.R. h.l. & M.W.B. |
| lighting E.R.                   | 1                         | 1.5  | 4               | 9.5   | 15                                      |                 |                      |
| lighting E.R.                   | 1                         | 1.5  | 4               | 9.5   | 20                                      |                 |                      |
| Supplied from 2 F.B. navigation |                           |  |                 |       |   |                 |                      |
| stem light                      | 1                         | 1.5  | 0.4             | 9.5   | 21                                      |                 | N.H.R. h.l. & M.W.B. |
| forward light aft               | 1                         | 1.5  | 0.4             | 9.5   | 64                                      |                 |                      |
| forward light forward           | 1                         | 1.5  | 0.4             | 9.5   | 170                                     |                 |                      |
| forward side light              | 1                         | 1.5  | 0.4             | 9.5   | 27                                      |                 |                      |
| port side light                 | 1                         | 1.5  | 0.4             | 9.5   | 26                                      |                 |                      |
| star signalling light           | 1                         | 1.5  | 1.5             | 9.5   | 4                                       |                 |                      |

MOTOR CABLES.

| ALL IMPORTANT MOTORS TO BE ENUMERATED. | No. | B.H.P.   | CONDUCTORS. | MAXIMUM CURRENT IN AMPERES. | APPROX. LENGTH (lead plus return feet). | INSULATED WITH. | HOW PROTECTED. |                      |
|--|-----|----------|-------------|-----------------------------|---|-----------------|----------------|----------------------|
| Supplied from main switchboard         |     |          |             |                             |   |                 |                |                      |
| Fuel oil transfer pump                 | 1   | 1        | 1           | 2.5                         | 9.2                                     | 15.5            | 17             | N.H.R. h.l. & M.W.B. |
| Lubricating oil pump                   | 1   | 3        | 1           | 10                          | 16                                      | 28              | 15             |                      |
| Supplied from 2 F.B.                   |     |          |             |                             |   |                 |                |                      |
| Ventilation fans cargo hold            | 2   | 148 watt | 1           | 1.5                         | 1.25                                    | 9.5             | 16-18          | N.H.R. h.l. & M.W.B. |
| Ventilation fan placed in E.R.         | 1   | 148 "    | 1           | 1.5                         | 1.25                                    | 9.5             | 24             |                      |
| Air supply fan oil fired furnace       | 1   | 100 "    | 1           | 1.5                         | 0.9                                     | 9.5             | 23             |                      |
| Domestic refrigerator                  | 1   | 100 "    | 1           | 1.5                         | 0.9                                     | 9.5             | 40             |                      |
| Supplied from 2 F.B.                   |     |          |             |                             |   |                 |                |                      |
| Hydrophor pump fresh water             | 1   | 0.5      | 1           | 1.5                         | 4.7                                     | 9.5             | 6              | N.H.R. h.l. & M.W.B. |
| Hydrophor pump sea water               | 1   | 0.5      | 1           | 1.5                         | 4.7                                     | 9.5             | 8              |                      |
| Air supply fan central heating         | 1   | 100 watt | 1           | 1.5                         | 0.9                                     | 9.5             | 20             |                      |

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.  
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.  
 The foregoing is a correct description.

STEREL & WECHGELAAR  
 ELECTRO-TECHN. INDUSTRIE N.V.  
 AMSTERDAM

Electrical Engineers.

Date 26<sup>th</sup> Feb 1951

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....

Minimum distance between electric generators or motors and steering compass.....

The nearest cables to the compasses are as follows:—

A cable carrying ..... Ampères ..... feet from standard compass ..... feet from steering compass.

A cable carrying ..... Ampères ..... feet from standard compass ..... feet from steering compass.

A cable carrying ..... Ampères ..... feet from standard compass ..... feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be ..... degrees on ..... course in the case of the standard compass, and ..... degrees on ..... course in the case of the steering compass.

Zaanlandsche Scheepbouw Mij.

Builder's Signature.

Date 25.1.1951.

Is this installation a duplicate of a previous case No If so, state name of vessel .....

Plans. Are approved plans forwarded herewith No If not, state date of approval.....

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith Yes

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....

The electrical equipment of this vessel has been constructed and installed under special survey in conformity with the Society's Rules and Regulations and in accordance with the approved plans and the Secretary's letter.  
 The materials used are of a good quality and the design and workmanship are good. On completion the equipment has been tried out under full working conditions and found satisfactory.  
 This equipment is in my opinion suitable for a classed vessel.

Noted sub 9/4/51

Total Capacity of Generators 11.2 Kilowatts.

The amount of Fee ... .. fl 301,- : When applied for, 23-3-1951

Travelling Expenses (if any) £ fl.: 30,- When received, .....19.....

W. H. van der Luit / H. V. D. S. LUIS  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute ..... FRI 13 APR 1951

Assigned See F.E. Melby. oph.

5m. 4.39.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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